AMERICAN MUSEUM NOVITATES

Number 675 Published by THE AMERICAN MUSEUM OF NATURAL HISTORY New York City Nov. 25, 1933

59.57, 72 C (6)

THE AFRICAN SPECIES OF *CURTONOTUM* MACQUART (DROSOPHILIDAE; DIPTERA)

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The genus *Curtonotum* Macquart (*Cyrtonotum* of authors) is represented in Africa by six species, unless it is found that *quadrimacula* Walker and *pictipennis* Thomson are identical or actually belong to a different genus. At least two of the species, *fuscipenne* Macquart and *albomacula*, new species, differ from the remaining species in lacking hair on the scutellum. I have attempted to elucidate the species said to belong to this genus but, unfortunately, the descriptions are not satisfactory as many essential characters were omitted by early authors, and only an examination of the types and the enumeration of these characters will definitely establish their systematic position. Since Malloch was quite familiar with *C. taeniatum* Fabricius, the type of the genus, it is safe to assume that his *striatifrons* has the scutellum haired, as it is entirely unlikely that he would have overlooked this character.

The types of the new species are deposited in The American Museum of Natural History.

TABLE OF SPECIES

1.—Wings dark brown; front and thorax vittate ..... *fuscipenne* Macquart.
Wings pale brownish or cinereous ..... 2.
2.—Wings with brown spots other than on the cross-veins ..... 3.
Wings without brown spots other than on the cross-veins ..... 4.
3.—Abdomen with black spots ..... *pictipennis* Thomson.
Abdomen reddish, pale laterally ..... *quadrimacula* Walker.
4.—Front with a pair of entire, brown vittae dividing the front into three almost equal pale stripes ..... *striatifrons* Malloch.
Front without brown vittae, usually dark above ..... 5.
5.—Abdomen blackish with white pollinose spots ..... *albomacula*, n. sp.
Abdomen yellowish, with brown spots or stripes ..... *quinquevittata*, n. sp.

Curtonotum fuscipenne Macquart

Diastata fuscipenne MACQUART, 1843, 'Dipt. Exot.,' II, part 3, p. 260 (Fig.).

Female, Memehtown, Liberia, August 25 (J. Bequaert).

This specimen agrees with Macquart's description in most respects, but a great deal depends upon the interpretation of the word "étroites"

in reference to the brown mesonotal vittae. If the word is interpreted as meaning "narrow" my specimen cannot possibly be *fuscipenne*, but if it is interpreted as meaning "approximate" there is no doubt that the determination is correct except that my specimen has a slender median mesonotal vitta and the fifth abdominal segment bears a pair of white pollinose spots.

FEMALE.—Face white pollinose, the carina shining black except above; front brown, from anterior view reddish on the anterior half or more, with the orbits narrowly, a narrow median vitta and a pair of anteriorly converging vittae white pollinose; a single pair of strong frontal bristles, situated slightly in front of the anterior ocellus and a very weak hair in front of them on the pollinose stripe; ocellars strong; postocellars strongly convergent; verticals and outer verticals strong. Occiput brown pollinose above, whitish below; cheeks linear. Proboscis and palpi blackish. Antennae black, the second segment more or less brownish red; third segment tapering, hardly twice as long as wide; arista black, with long black rays, the base brownish.

Thorax black in ground color; mesonotum brown pollinose with three cinereous vittae, all wide on the anterior margin, but narrow and yellowish behind the suture, the middle one geminate except in front, the sides also broadly grayish; pleura gray pollinose. Scutellum wholly brown, with two pairs of strong and two pairs of weak marginals; two pairs of dorsocentrals; a single sternopleural with a few short hairs. surrounding it.

Legs reddish, the coxae brown, with cinereous pollen; anterior femora with comb of tiny bristles apically.

Wings dark brown, slightly paler posteriorly; posterior cross-vein transverse Squamae reddish brown. Halteres pale yellow.

Abdomen black, brown pollinose, the fifth segment with a large pale pollinose spot on either side, the fourth with traces of similar spots.

Curtonotum quadrimacula Walker

Helomyza quadrimacula WALKER, 1849, 'List Dipt. Brit. Mus.,' IV, p. 1093.

Described from Sierra Leone.

I have not seen this species, but if it belongs to *Curtonotum* it should be readily recognized by the characters given in the key.

Curtonotum pictipennis Thomson

Geomyza pictipennis THOMSON, 1868, 'Eugenies Resa,' p. 598.

Described from Cape of Good Hope.

Apparently this species is very close to *quadrimacula*, and possibly identical with it. There is very little in the descriptions to indicate that there are two species concerned.

Curtonotum striatifrons Malloch

Cyrtonotum striatifrons Malloch, 1930, Ann. Mag. Nat. Hist., VI, p. 325.

Described from Bahr el Ghazal, Sudan.

A very distinct species and readily recognized by the reddish and brown striped front.

Curtonotum albomacula, new species

Length, 3.25 to 4 mm.

Male.—Face rather narrow, cinereous pollinose. Front slightly widening above, reddish, darker above, the frontal stripes ashy pollinose; anterior frontal bristle strong; ocellars long. The color of the front is somewhat variable from different views and the orbits are always narrowly pale pollinose. Occiput black, cinereous pollinose; face and cheeks yellowish in ground color, the facial grooves dark on the outer side. Palpi and proboscis blackish. Antennae reddish, the third segment mostly brown; arista black, with long black rays, the base broadly reddish.

Thorax blackish in ground color although the pleura may be more or less reddish. Mesonotum with yellowish pollen, but with a brown mottling and sometimes appearing mostly brown, the anterior and lateral borders more or less grayish; scutellum brownish with narrow yellow apical border, bearing two pairs of strong and two pairs of weak marginals; pleura whitish pollinose, the mesopleura more yellowish; in front with a brown spot immediately below the humeri and another above the front coxae. One strong sternopleural, the sternopleura rather evenly short-haired.

Legs yellow; coxae brown; anterior femora brown with reddish apex; middle femora usually with brown base, the posterior pair more or less extensively brown basally and with an obscure brownish band beyond the middle. Hair black.

Wings cinereous hyaline, the cross-veins more or less clouded with brown. Squamae yellowish. Halteres white.

Abdomen black, brown pollinose; first segment yellow, sometimes with a pale brown spot behind toward either side; second segment yellowish with the apical third black and a transverse brownish spot toward either side in front, third to fifth segments each with a pair of very large white pollinose spots on the dorsum and much larger spots on the under surface, the inner edges of the tergites black, the pale spots partly contiguous, that on the third segment partly yellowish in ground color and those on the venter mostly yellow beneath the pollen. Basal sternites yellow, the apical ones brown with yellow apices.

Female.—Agrees with the male but the pale abdominal spots are somewhat smaller and the sternites are mostly yellow.

Types.—Holotype, male, allotype, female, Dande River, S. Rhodesia, July, 1933. Paratypes: two males and one female, Dande River, July, 1933; four females, Gurungwe, July, 1933 (A. Cuthbertson); female, Lenga Town, Liberia, August 15 1926, on human excrement (J. Bequaert).

Curtonotum quinquevittata, new species

Cyrtonotum anus Malloch, 1930, Ann. Mag. Nat. Hist., VI, p. 327. (Not Meigen.)

While I have no authentic specimens of *anus* Meigen it is apparent from available descriptions that the species from Southern Rhodesia is

not Meigen's species. Malloch has already enumerated the principle characters of this species.

Length, 4 to 5 mm.

MALE.—Head yellow, the occiput black in ground color; front reddish yellow; the cinereous pollinose stripes extending to the anterior margin of the front or almost so, and broadly bordered with rusty reddish, the extremely narrow orbits white pollinose; anterior frontal bristle situated far forward; a tiny bristle inside the reclinate frontal or in front of it; ocellars strong; anterior half of front with tiny black hairs. Occiput grayish pollinose. Face and cheeks white pollinose. Proboscis reddish, the palpi brown. Antennae reddish, the third segment mostly brown; arista brown, with long black rays, more or less reddish basally.

Thorax mostly blackish in ground color, the scutellum, broad sides of the mesonotum, and middle of the pleura yellow; pollen cinereous white, cinereous on the mesonotum, the latter with four narrow reddish-brown vittae, the outer pair obscure and interrupted at the suture, the median pair represented on the scutellum by an incomplete median vitta. Two pairs of strong and two pairs of very weak marginal scutellars, the surface of the scutellum with coarse, appressed hairs. One strong sternopleural, one or two very weak bristles above, and scattered hairs, mostly arranged in a single row in front of the middle coxae.

Legs entirely yellow. Wings cinereous hyaline, the cross-veins lightly clouded with brown. Squamae yellow. Halteres white.

Abdomen pale reddish, clothed with yellowish pollen, with three rows of brown spots above and two below. Dorsum with a broad median brown vitta extending from the base of the third segment to the apex of the abdomen, narrowly interrupted at the apices of the segments; the second to fourth segments each with a slightly oblique, broad, transverse brown spot on either side, those on the second and third segments produced forward in the middle almost to the base of the segment; on the under surface the tergites each have a brown basal spot on the lateral margins, those on the second and third segments more or less oval, the others triangular and tapering to the apex. Sternites reddish yellow, the fifth black. Genitalia reddish.

FEMALE.—The fine frontal hair is a little more conspicuous and the brown lateral spots on the fifth abdominal segment extend forward in the middle.

TYPES.—Holotype, male, allotype, female, Lomagundi, S. Rhodesia, December, 1928. PARATYPES: four females, Lomagundi, December, 1928 (A. Cuthbertson); male and female, Lourenco Marques, January–March, 1914 (H. A. Junod).

This species differs from the other African species that I have seen in possessing hair on the scutellum. This character is not mentioned in available descriptions, hence I am unable to determine whether this is the only species having the scutellum haired.